



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/627,759 | 07/28/2003 | Isoji Yao | 030858 | 4426 |

23850 7590 08/05/2005

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

EXAMINER

PAIK, SANG YEOP

ART UNIT PAPER NUMBER

3742

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,759

Applicant(s)

YAO, ISOJI

Examiner

Sang Y. Paik

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugo (US 5,076,467) in view of Langmuir et al (US 2,437,963) or Ohnishi et al (US 5,186,120), Benade et al (US 6,072,937), and Hutchinson (US 6,647,204).

Sugo shows a steam-supply apparatus including a pressurized steam sent from a steam-generating portion through an electromagnetic valve and a connecting tube. However, Sugo does not show providing a heater to the steam-blowing portion, the connecting tube being flexible, and a return pipe.

Langmuir shows a steam-supplying apparatus having a steam generating portion and a steam blowing portion where a heater is provided to the steam blowing portion to maintain the desired steam pressure and temperature. Ohnishi also shows providing a vapor generating portion and a vapor blowing portion where a heater is provided to the vapor blowing portion to maintain the desired vapor pressure and temperature. Benade shows a steam generator with a flexible tube connected to the steam generator to direct the steam out of the steam chamber. Hutchinson shows a steam apparatus having a steam by pass valve that returns the heated steam back to the water supply (see Figure 24).

Art Unit: 3742

In view of Langmuir or Ohnishi, it would have been obvious to one of ordinary skill in the art to provide the heater to the steam-blowing portion to maintain the desired steam pressure and temperature. Furthermore, the claimed heating steam circulation passage would inherently be present in the electromagnetic valve in order to pass the steam there through and would also be heated by the heated steam. In view of Benade, it would have been obvious to one of ordinary skill in the art to adapt Sugo with a flexible connecting tube so that the steam can be conveniently directed in a flexible direction. In view of Hutchinson, it would have been obvious to one of ordinary skill in the art to adapt Sugo with a return pipe to control the output of the heated steam and to divert the unused or excess heated steam to the water supply for reuse.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugo in view of Langmuir or Ohnishi, Benade, and Hutchinson as applied to claims 1, 2, 4 and 5 above, and further in view of Yamaguchi et al (US 5,803,938).

Sugo in view of Langmuir or Ohnishi, Benade, and Hutchinson shows the structure claimed except a pressure-reducing valve disposed on a steam passage between the boiler and the electromagnetic valve.

Yamaguchi shows a pressure adjuster (31) disposed between the vaporization chamber and a steam outlet valve. In view of Yamaguchi et al, it would have been obvious to one of ordinary skill in the art to adapt Sugo, as modified by Langmuir or Ohnishi, Benade, and Hutchinson, with a pressure reducing or adjuster valve to further control the rate at which the steam is generated and sent to the steam outlet valve including the electromagnetic valve.

Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues the applied prior art Langmuir and Ohnishi are nonanalogous art to Sugo. While these prior art involve different applications, they are in the same field of endeavor which is in the field of generating steam or vapor with an electrical heating element, and furthermore these prior art are reasonable pertinent to the particular problem with which the applicant was concerned which is to maintain the desired pressurized steam. Thus, the applicant's argument is not deemed persuasive.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3742

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y. Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sang Y Paik
Primary Examiner
Art Unit 3742

syp